Avery Weigh-Tronix

THE evolution SERIES™

Model E1010 Indicator User's Manual

UNITED STATES

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

CANADA

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la Class A prescrites dans le Règlement sur le brouillage radioélectrique que edicté par le ministère de2s Communications du Canada.

EUROPEAN COUNTRIES

WARNING

This is a Class A product. In a domestic environment this product may cause radio interference in which the user may be required to take adequate measures.

CAUTION

CAUTION: DANGER OF EXPLOSION IF BATTERY IS INCORRECTLY REPLACED.
REPLACE ONLY WITH THE SAME OR EQUIVALENT TYPE RECOMMENDED BY THE MANUFACTURER.
DISPOSE OF USED BATTERIES ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS

ATTENTION: IL Y A DANGER D'EXPLOSION S'IL Y A REMPLACEMENT INCORRECT DE LA BATTERIE, REMPLACER UNIQUEMENT AVEC UNE BATTERIE DU MÊME TYPE OU D'UN TYPE ÉQUIVALENT RECOMMANDÉ PAR LE CONSTRUCTEUR. METTRE AU REBUT LES BATTERIES USAGÉES CONFORMÉMENT AUX INSTRUCTIONS DU FABRICANT".

CAUTION: THE POWER SUPPLY CORD IS USED AS THE MAIN DISCONNECT DEVICE, ENSURE THAT THE SOCKET-OUTLET IS LOCATED/INSTALLED NEAR THE EQUIPMENT AND IS EASILY ACCESSIBLE.

ATTENTION: LE CORDON D'ALIMENTATION EST UTILISÉ COMME INTERRUPTEUR GÉNÉRAL. LA PRISE DE COURANT DOIT ÊTRE SITUÉE OU INSTALLÉE À PROXIMITÉ DE L'ÉQUIPEMENT ET ÊTRE FACILE D'ACCÉS".

Avery Weigh-Tronix reserves the right to change specifications at any time.

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IMPORTANT

This equipment must be routinely checked for proper operation and calibration. Application and usage will determine the frequency of calibration required for safe operation.

Specifications

Power requirements
- 100-240 Volts AC @ 600 mA
- 50/60 Hz
- Internal battery: 23 hours of continuous operation with one weight sensor; 15 hours of continuous operation with four weight sensors
- Standby mode extends battery life

Excitation
- 5 volts
- Supports up to four 350-ohm weight sensors

Analog signal input range
- +/- 12 mV/V

Analog input sensitivity
- 0.2 µV/divisions minimum
- 1.0 µV/divisions recommended

Calibration
- 2 to 5 points stored

Operational keys
- Tare, Select, Zero, Print, Units, F1, Clear, Mode, Escape, Enter, On/Off, 0-9 numeric and decimal point

Operational annunciators
- Center of Zero, Motion, Gross, Tare, Net, Battery status
- Under/Target/Over
- Units of measure (LB, KG)
- Peak, Print, OP1, OP2, OP3

Display
- Seven-digit, seven-segment, 0. 8-inch high
- Lighted STN Transmissive
- Display rate Selectable (1, 2, 5, 10)

Analog to digital conversion rate
- 60 times per second

Unit of measure:
- Three, independently programmable
- Pounds, Kilograms, Custom

Capacity selections
- 999,999 with decimal located from zero to five places

Incremental selections
- Multiples and sub-multiples of 1, 2, 5

Programmable selections
- Zero range, motion detection, automatic zero tracking, five-point linearization

Time and date / RAM
- Battery backed up real time clock and RAM

Internal resolution
- 41,248,140 counts per mV/V per sec

Standard inputs
- Three logic level inputs for: Zero, Print, Tare, Units, F1

Standard outputs
- Three cutoff outputs, open collector design
- Serial port RS-232 or 20mA current loop, or RS-422 or RS-485

Serial Command Inputs
- Programmable serial response to ASCII character input, SMA protocol

Self diagnostics

Display, keys, inputs, outputs, serial port

Circuitry protection
- RFI, EMI, and ESD protection

Options
- Trips Interface Unit (TIU3)

Operating applications
- General weighing, Simple counting, Check weighing,
- Peak measurement, Batching, Remote display

Operating temperature
- 14 to 104° F (-10 to 40° C) approved
- -4 to 140° F (-20 to 60° C) non-legal
- 10 to 90% noncondensing humidity

Enclosure
- Stainless steel NEMA 6/4X

Dimensions:
- 9.25” W x 9.25” H x4.5 “ D (23.5cm W x 23.5cm H x 11.4cm D) (without mounting bracket)
- 9.75" W x 11” H x 7" D (24.8cm W x 28cm H x 17.8cm D) (with mounting bracket)

Weight: 11 lb, 5 kg

Agencies:
- NTEP CC# 04-029 Class III/IIIL:10,000 divisions
- OIML Cert. No. R76/1992-GB1-04.09 Class III: 10,000 divisions
- Canadian Weights and Measures pending
- UL/CUL
- CE marked

Introduction

The Model E1010 is an easy to use, uncomplicated indicator for general weighing applications. It is ideal for bench scales, floor scales and tank weighing applications. The display includes a multi-segment fan graph for fast visual awareness for checkweighing. The indicator can perform counting functions, peak weight functions, act as a remote display and operate on battery power. The indicator also has 10 PLU (Product Look Up) memory channels for storing data.

Communication port allows connection to a printer, remote display or computer. The indicator also has three setpoint controls and can accommodate a footswitch for zero, print or tare function.

All this in an NEMA 6/4X rated enclosure.

About This Manual

Major sections of this manual are headed by titles in a black bar like *Introduction* above. Subheadings appear in the left column. Instructions and text appear on the right side of the page. Occasionally notes, tips, and special instructions appear in the left column.

Setup

Attention

The Model E1010 is battery powered.

Charge the battery overnight before using the indicator on battery power only.

The unit can be run on the transformer if the battery is drained or absent.

See Battery Information *for more information.*

Your indicator will be installed by a qualified Avery Weigh-Tronix distributor. They will make the required connections to your scale and peripheral devices.

1. With the unit plugged in, see note at left, press and hold the ⏻ switch until the display lights up, then release the key.
2. The indicator powers up in normal operation mode.

Front Panel

The front panel, shown in Figure 1, consists of the keys and display.

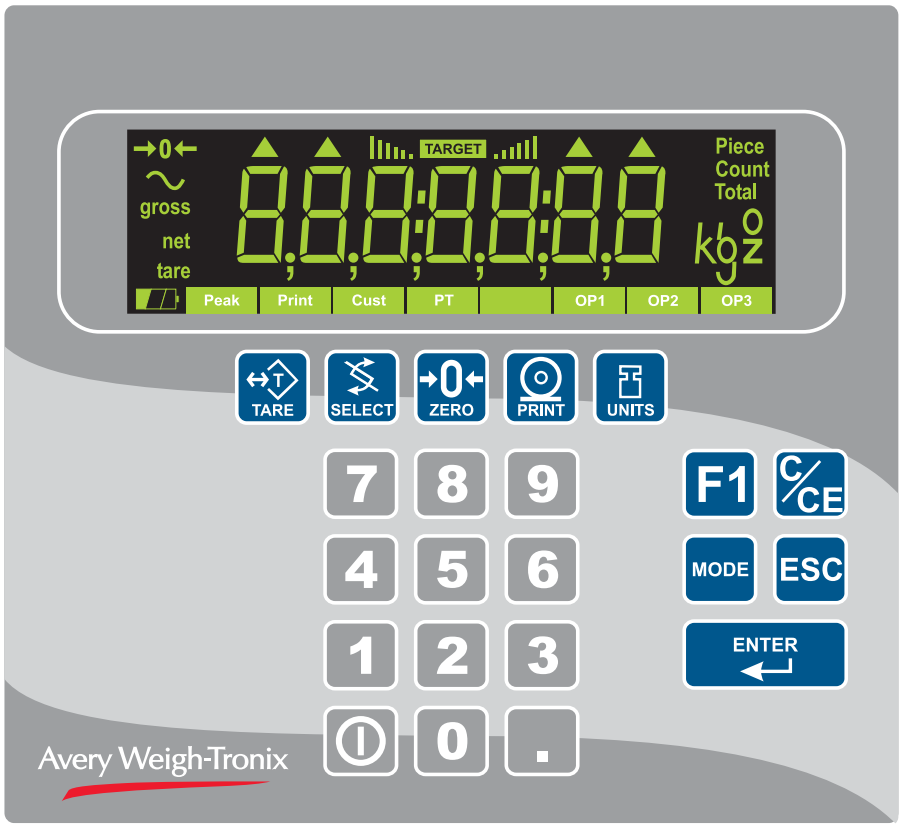


Figure 1
E1010 front panel

Keys

Never press a key with anything but your finger. Damage to the overlay may result if sharp or rough objects are used.

The functions of the keys on the front panel are listed below.

Press the **TARE** key to perform a tare function. Also acts as a left arrow key when in the User menu.

Press the **SELECT** key to toggle between Gross, Tare, Net, Count, Gross Accumulator, Net Accumulator, Transaction Counter, Piece Weight, and Peak. This is dependent on the current application. Also acts as an up arrow key when in the User menu.

Press the **ZERO** key to zero the display.

Press the **PRINT** key to send information to a peripheral device through the Comm port. Also acts as a down arrow key when in the User menu.

Press the **UNITS** key to scroll through the available units of measure while in normal operating mode. Also acts as a right arrow key when in the User menu.

Press the **F1** key to select application specific choices. Press and hold to access the cutoffs (trips) function. Also used to access PLU (Product Look Up) memory channels.

Press the **C/CE** key to clear entries.

Press the **MODE** key to scroll through the enabled applications. The application name is briefly displayed when key is released.

Press the **ESC** key to escape a function or return to normal operation mode. Press and hold to access the password display for the User menu.

Press the **ENTER** key to accept displayed choices.

Use the numeric keypad to enter values.
For example:

- ID entry
- Setpoint target entry
- Preset tare entry
- Password entry

To turn the unit on, press and hold the **ON/OFF** key until the display turns on. To turn the unit off, press and hold the **ON/OFF** key until the unit turns off.

Battery Information

When the indicator goes to sleep you must press the **ON/OFF** *switch to restart the indicator.*

This unit contains a sealed rechargeable 6 volt, 3.0Ah, lead-acid battery. Life expectancy of this battery is 3-5 years in standby use or:

180 charging cycles (approx.) if discharged 100%
400 charging cycles (approx.) if discharged 50%
1200 charging cycles (approx.) if discharged 30%

Battery life is 23 hours with one 350 ohm weight sensor and 15 hours with four 350 ohm weight sensors. Recharge time from complete discharge is 14 hours while powered up and in service (single loadcell). The AC adapter/ charger will charge the battery as it powers the indicator.

PLU (Product Look Up) Memory Channels

If there are preset tares in the PLUs, you cannot enter a keyboard or pushbutton tare. Preset tares are enabled and entered under the Supervisor menu. See the Service Manual *for instructions.*

If preset tares are not enabled, any tare you enter by keyboard or pushbutton method will be active for all PLUs.

This indicator has 10 channels of memory called PLU or Product Look Up. Each channel can contain the following information:

Channel #
ID#
Tare
Gross Accum.
Net Accum.
Total
TARGET OP1
TARGET OP2
TARGET OP3
Lower Limit
Upper Limit
Count Accum.
Piece Weight
Peak Weight

1. To activate or recall a PLU, key in the desired channel number (0-9) and press the **F1** key. . .

   The PLU channel is active. Any of the items listed above that have values are activated. Any values that are listed above that change while this PLU is active are stored, ie; accumulator, count, etc.

2. PLU channels can be cleared by using a password protected menu. These instructions are found in the *Service Manual*. You can also print a report of all the PLU channels in the same password protected menu.

Entering an ID Number

You can enter an ID number which is then part of the active PLU channel. To enter an ID, key in a number on the keypad then press the **ENTER** key.

Menu Mode

The E1010 has a User menu which you can use to do the following:

- Audit the number of configurations and calibrations performed
- See software information
- Display test
- Button test
- Serial port test

1. Access the User menu by pressing and holding the **ESC** key for 3-5 seconds.

   PASS_ is displayed.

User menu password is 111. You must key in the password within 10 seconds or the display returns to normal operation mode.

2. Key in the User menu password = 111 and press the **ENTER** key. Figure 2 shows a flowchart of the User menu items. Use the keys shown in the dotted box in Figure 2 to navigate through the menu and choose the items you want.

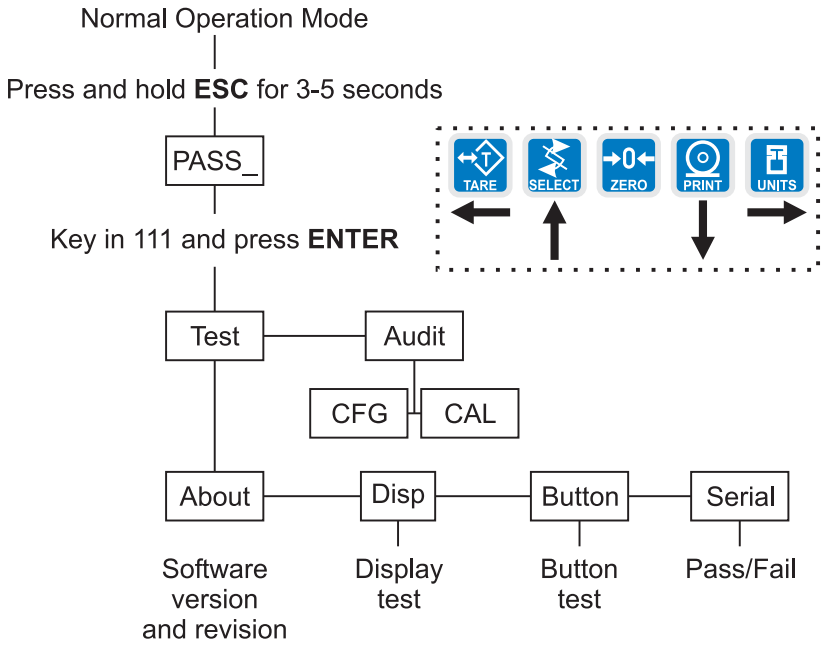


Figure 2
User menu flowchart

Specific instructions on the User menu appear in the section *Indicator Diagnostics* later in the manual.

Indicator Operations

When the indicator goes to sleep you must press the **ON/OFF** *switch to restart the indicator.*

This indicator has a 10 channel PLU (Product Look Up) memory. To access a memory channel, press a number from 0 to 9, then press the **F1** *key.*

The E1010 comes equipped with several weighing applications;

- Accumulator weighing (default setting)
- Batch weighing
- Checkweigher
- Counting
- Peak capture
- Remote display

These applications are enabled using a password protected Service menu. See the Service Manual for instructions on enabling applications and clearing accumulators.

The accumulator application comes as the default application. You can do gross weighments, tare/net weighments and accumulator functions. Below are instructions for each.

Gross Weighing

To change unit of measure, press the **UNITS** *key.*

To perform gross weighing, power up the unit and follow these steps:

1. Empty the scale and press **ZERO** key to zero the display. . .
   0 is displayed and gross and center of zero annunciators are lit.
2. Place item to be weighed on the scale. . .
   Weight is displayed.

Tare/Net Weighing

To perform a net weighment, power up the unit and follow these steps:

1. Empty the scale and press **ZERO** key to zero the display. . .
   0 is displayed and gross and center of zero annunciators are lit.
2. Place item to be tared on the scale. . .
   Weight is displayed.
3. Press the **TARE** key. . .
   0 is displayed and net annunciator is lit.
4. Place material to be weighed on the scale. . .
   Net weight of material is displayed and net annunciator is lit.
5. Repeatedly press the **SELECT** key to scroll through gross, tare, and net values. Remove the weight from the scale and press **TARE** to return to gross mode.

Accumulator Weighing

Press the **MODE** *key to scroll through the enabled applications.*

You can use tare/net weighing with the accumulator application. The accumulator stores both gross and net totals for later recall.

The accumulator is memory that collects individual weighments (gross and net) and stores the totals. These totals can be recalled at any time and the number of weighments included in the totals can be displayed. With the proper password all information can be deleted. See the *Service Manual*.

The accumulator maximum is 999,999. It does not rollover and start over at 0.

To use the accumulator, power up the unit and follow these steps:

1. Empty the scale and press the **ZERO** key to zero the display. . .

   0 is displayed and gross and center of zero annunciators are lit.

2. Place item on the scale. . .

   Weight is displayed.

3. You can press the **PRINT** or **F1** key to add weight to the accumulator. If you press **PRINT**, the weight is accumulated and the information printed. If you press **F1**, the weight is accumulated. Scale weight must return to zero before another weighment can be accumulated.

4. Repeat 2 and 3 for each weighment you want to accumulate.

5. To review the accumulator total and the number of weighments, remove all weight from the scale and press the **SELECT** key repeatedly. . .

   1st press = Net weight displayed
   2nd press = Tare weight displayed
   3rd press = Gross total of all weighments is displayed
   4th press = Net total of all weighments is displayed
   5th press = Number of weighments is displayed
   6th press = Display returns to gross weigh mode

You need the supervisor's password to clear the accumulator. See the *Service Manual* for instructions.

Using Cutoffs

You can use the cutoff (or trips) function if so desired while in the Accumulator application. The output will turn on when weight goes above the target set for that output and will remain on until the weight falls below the target. Follow these steps to set up to three outputs:

1. With the indicator powered up, press and hold the **F1** key until. . .

   OP1 is displayed.

2. Press the **PRINT** key to set the value for the output. . .

   Key in a value and press the **F1** key to accept the value. ***OP1*** will be displayed.

   You can scroll through all three outputs by using the **TARE** and **UNITS** keys.

3. Press the **UNITS** key. . .

   OP2 is displayed.

4. Repeat steps 2 and 3 for each output. Press **ESC** key to return to normal operation with the ingredients active. Indicator will automatically return to normal weighing mode after OP3 value is entered.

Checkweighing

This indicator has a 10 channel PLU (Product Look Up) memory. To access a memory channel, press a number from 0 to 9, then press the **F1** *key.*

The graph is based off of net weight so if a tare is active only the net weight is considered for checkweighing. If there is no tare, gross weight is used as the basis for the graph.

This section applies if your indicator has the checkweighing application active. Applications are activated through a password protected menu. See the *Service Manual* for instructions.

Checkweighing allows a quick, visual check of the acceptability or unacceptability of an item's weight.

You can set your target weight in one of two ways. The mode is set in a password protected menu. See the *Service Manual* for instructions. The two modes are explained below:

Limit Mode Enter the upper and lower limits for your item and the indicator will use those values to run the display. See Figure 3.

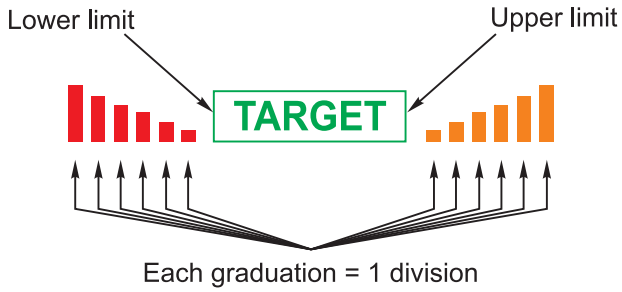


Figure 3
Limit mode

Sample Mode Place a correct weight "product" on the scale and press the F1 key. The indicator will use this weight to run the display. Upper and lower limits will automatically be 1 division above and below the target weight respectively. Figure 4 shows how the graphic display works in Sample mode. Each graduation is equal to 1 scale division. The TARGET light stays lit if weight is ±1 division of the target weight.

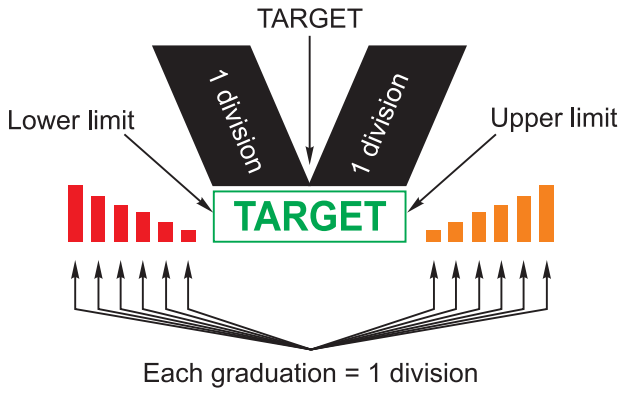
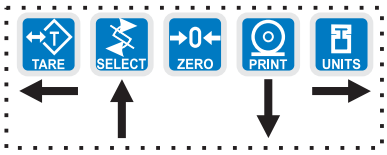


Figure 4
Sample mode

Directions for each mode follows.

Limit Mode: Entering Upper and Lower Limits



Follow these steps to setup and use the checkweigher function if limit mode is enabled, where you set upper and lower weight limits:

1. Press the **F1** key. . .

   Up is displayed followed by an underscore cursor.

2. Key in the upper weight limit. Press the **F1** key. . .

   Lo is displayed.

3. Key in the lower weight limit. Press the **F1** key. . .

   The indicator returns to normal weigh mode.

4. Place items on the scale and the display will show if the weight is over, under or acceptable based on the limits you have set.

Sample Mode: Using Product to Set Target Weight

Follow these steps to setup and use the checkweigher function if sample mode is enabled, where you set target weight based on an actual “product”:

1. Place a sample, of the correct weight, on the scale. . .

   Weight is displayed.

2. Press the **F1** key.

   The target weight is captured, the indicator switches to net mode, the display reads ***0*** and your indicator is ready to use as a checkweigher. The target weight will be the same as your sample item and the target will stay lit whenever an item’s weight is within ±1 division of the target weight.

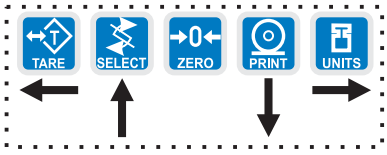
Performing a Checkweighing Weighment

1. With your target weight set, as described in one of the previous two sections, place your item on the scale. . .

   If the weight equals the acceptable value, the TARGET annunciator lights. If the weight varies from the target value, upper or lower segments may be lit and the weight will show a plus or minus weight reading for the deviation from the target weight.

2. Repeat step 1 for all products of this weight.

Using Cutoffs



You can use the cutoff (or trips) function if so desired while in the checkweigher application. Follow these steps to set up to three outputs:

1. With the indicator powered up, press and hold the **F1** key until. . .

   OP1 is displayed.

2. Press the **PRINT** key to set the value for the output. . .

   Key in a value and press the **F1** key to accept the value. ***OP1*** will be displayed.
   You can scroll through all three outputs by using the **TARE** and **UNITS** keys.

3. Press the **UNITS** key. . .

   OP2 is displayed.

4. Repeat steps 2 and 3 for each output. Press **ESC** key to return to normal operation with the ingredients active. Indicator will automatically return to normal weighing mode after OP3 value is entered.

Counting

This indicator has a 10 channel PLU (Product Look Up) memory. To access a memory channel, press a number from 0 to 9, then press the **F1** *key.*

This section applies if your indicator has the counting application active. Applications are activated through a password protected menu. See the *Service Manual* for instructions.

Follow these steps to perform a counting function with the E1010:

1. In gross weight mode, press the **F1** key. . .

   PCS is displayed followed by an underscore cursor.

2. Enter the sample size you desire (see note at left) and press **ENTER**. . .

   Add X is displayed. X is the sample size you keyed in.

3. Place the correct number of parts on the scale and press the **ENTER** key. ***BUSY*** is briefly displayed, followed by one of two possible displays:

   a. If the sample met the minimum sample requirements, the display will show the correct number of parts on the scale.

   b. If the sample size was not large enough, the display will tell you how many more parts to add to the scale (For example: **5** might be displayed.) Add the number requested, wait for the scale to stabilize, then press **ENTER** again. The display will read the correct number of parts on the scale.

4. Place the parts on the scale to be counted.

Using Cutoffs

You can use the cutoff (or trips) function if so desired while in the counting application. Follow these steps to set up to three outputs:

1. With the indicator powered up, press and hold the **F1** key until. . .

   OP1 is displayed.

2. Press the **PRINT** key to set the value for the output. . .

   Key in a value and press the **F1** key to accept the value. ***OP1*** will be displayed.

   You can scroll through all three outputs by using the **TARE** and **UNITS** keys.

3. Press the **UNITS** key. . .

   OP2 is displayed.

4. Repeat steps 2 and 3 for each output. Press **ESC** key to return to normal operation with the ingredients active. Indicator will automatically return to normal weighing mode after OP3 value is entered.

Batch Weighing

This indicator has a 10 channel PLU (Product Look Up) memory. To access a memory channel, press a number from 0 to 9, then press the **F1** *key.*

This section applies if your indicator has the batching application active. The batching application allows you to set three cutoffs or trips based on three progressively larger weights. There are two possible modes of batching; Auto or Manual. Each are explained below.

AUTO
As weight is added to the scale and the first cutoff point is reached, OP1 annunciator lights and Output #1 is activated. When weight reaches the second cutoff, OP2 annunciator lights and Output #2 activates. When weight reaches the third cutoff, OP3 annunciator lights and Output #3 activates.

MANUAL
In manual mode, after you begin the batching process, you must press the **F1** key to activate each subsequent output after each output weight is reached.

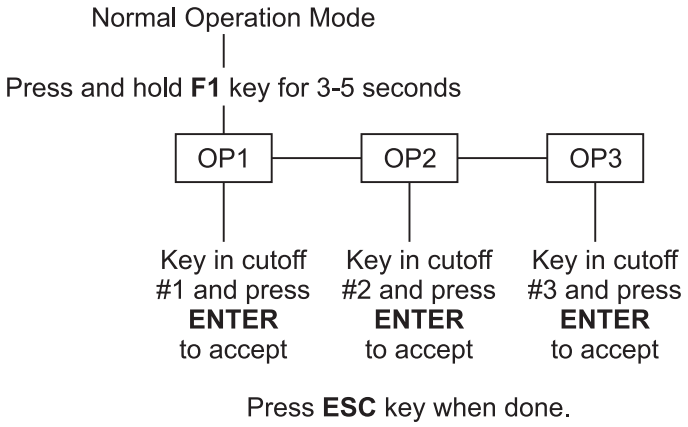

Normal Operation Mode
Press and hold F1 key for 3-5 seconds
OP1
OP2
OP3
Key in cutoff #1 and press ENTER to accept
Key in cutoff #2 and press ENTER to accept
Key in cutoff #3 and press ENTER to accept
Press ESC key when done.

Figure 5
Output flowchart

Configuring Outputs

Follow these steps and the flowchart in Figure 5 to setup a recipe with three ingredients:

1. With the indicator powered up, press and hold the **F1** key until. . .

   OP1 is displayed.

2. Press the **PRINT** key to set the value for the output. . .

   Key in a value and press the **F1** key to accept the value. ***OP1*** will be displayed.

   You can scroll through all three outputs by using the **TARE** and **UNITS** keys.

3. Press the **UNITS** key. . .

   OP2 is displayed.

4. Repeat steps 2 and 3 for each output. Press **ESC** key to return to normal operation with the ingredients active. Indicator will automatically return to normal weighing mode after OP3 value is entered.

Peak Weighing

This section applies if your indicator has the Peak application active.

Peak weight is defined as the highest stable weight reached by the scale. Momentary higher weights that do not stabilize are ignored.

While in Peak mode, the ***Peak*** annunciator remains lit.

Follow these steps to perform a peak weighment:

1. Empty the scale and press the **ZERO** key to zero the display. . .

   0 is displayed.

2. Place the item(s) on the scale. . .

   Weight is displayed.

3. After the motion annunciator (**~**) turns off remove the item(s) from the scale,

   The peak weight is displayed and the center-of-zero annunciator (→0←) lights.

4. To clear the peak value, press the **F1** key. . .

   0 is displayed.

5. Repeat steps 2-4 for other weighments.

Use the **SELECT** key to scroll through G, T, N and peak values

This indicator has a 10 channel PLU (Product Look Up) memory. To access a memory channel, press a number from 0 to 9, then press the **F1** *key.*

Using Cutoffs

You can use the cutoff (or trips) function if so desired while in the peak weighing application. Follow these steps to set up to three outputs:

1. With the indicator powered up, press and hold the **F1** key until. . .

   OP1 is displayed.

2. Press the **PRINT** key to set the value for the output. . .

   Key in a value and press the **F1** key to accept the value. ***OP1*** will be displayed.

   You can scroll through all three outputs by using the **TARE** and **UNITS** keys.

3. Press the **UNITS** key. . .

   OP2 is displayed.

4. Repeat steps 2 and 3 for each output. Press **ESC** key to return to normal operation with the ingredients active. Indicator will automatically return to normal weighing mode after OP3 value is entered.

Communications and Printing

The default serial port parameters are 9600 baud, 8 databits, no parity and 1 stop bit.

The E1010 provides an RS-232 output for data transmission to a peripheral device. Refer to the Service Manual for RS-232 interface connections.

If your indicator has a peripheral device connected, from the gross/net weighing mode press the **PRINT** key to transmit the selected output(s).

The **PRINT** annunciator will illuminate while data is transmitted and the data configured to be printed will be output to the printer.

Print Format #1 for weighing applications

G 1234.56 lb<CR><LF>

Print Format #1 for counting application

Count: 12230

Print Format #1 for peak application

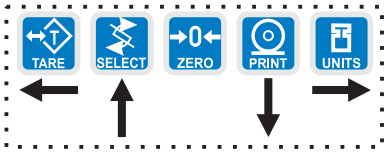
12230 lb<CR>

Error Messages

The following are displays you may see if problems occur or if invalid operations are attempted with your indicator:

Display	Description
--------	Overrange weight.
_______	Underrange weight.
CAnt	The unit cannot perform a function. Displayed only while key is held down.
SEALEd	Displayed while a key is pressed when attempting to modify a sealed selection without edit privileges.

Indicator Test Functions



The user menu lets you test various functions of the indicator. The user menu is shown in Figure 6. Instructions for using the Test portion of the menu are found below.

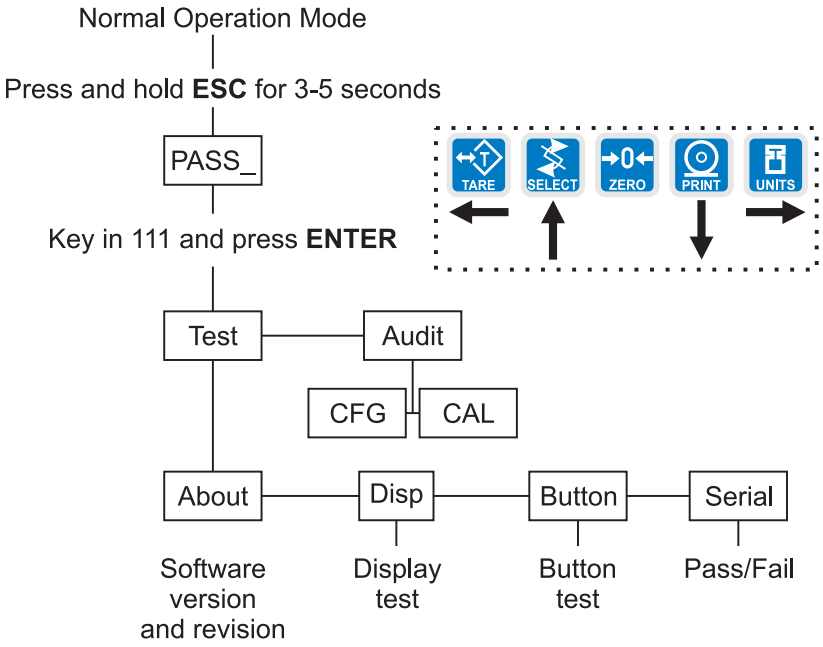


Figure 6
User Menu

1. Access the User menu by pressing and holding the **ESC** key for 3-5 seconds.

   PASS_ is displayed.

2. Key in the User menu password = 111 and press **ENTER**.

   TEST is displayed.

3. Press the **PRINT** key.

   ABOUT is displayed. Press the **PRINT** key then the **UNITS** key to view the part number and revision level for the software found in your indicator.

   Press **SELECT** key to return to ***ABOUT***.

4. Press the **UNITS** key. . .

   DISP is displayed. This is the display test item.

5. Press the **PRINT** key to perform a dynamic test of the display.
6. Press **ESC** key to stop the dynamic test.
7. Press the **UNITS** key. . .

   BUTTON is displayed. This is the button test item.

8. Press the **PRINT** key to perform a button test. Each key you press will be reflected on the display by a number to confirm the button is functioning correctly. See Table 1. The **ESC** key is excluded from this test. It is used to stop the testing and return to the menu item.

Table 1
Key / Number Equivalents

Tare =	1	4 =	12
Select =	2	5 =	13
Zero =	3	6 =	14
Print =	4	1 =	17
Units =	5	2 =	18
F1 =	6	3 =	19
Power =	7	0 =	23
7 =	8	. =	24
8 =	9	C/CE =	20
9 =	10	Mode =	15
		Enter =	21

9. Press **ESC** key to stop the button test.

   BUTTON is displayed.

10. Press the **UNITS** key. . .

    SERIAL is displayed. This is the serial test item. To test the serial port, jumper the TX and RX lines. Continue to step 11.

11. Press the **PRINT** key to access the serial test.

    The display will show ***FAIL*** unless the TX and RX lines are jumpered or there is a problem with the serial port. ***PASS*** is displayed if the serial port is working properly.

12. Press **SELECT** key to exit the serial test.

    SERIAL is displayed.

13. Press the **SELECT** key. . .

    TEST is displayed.

14. Press the **UNITS** key. . .

    AUDIT is displayed.

Audit counters cannot be reset.

15. Press the **PRINT** key. . .

    CFG is displayed. This stands for the configuration audit counter.

16. Press the **PRINT** key to see the number of times the configuration has been altered on this indicator.
17. Press the **SELECT** key. . .

    CFG is displayed.

18. Press the **UNITS** key. . .

    CAL is displayed. This stands for the calibration audit counter.

19. Press the **PRINT** key. . .

    The number of times the indicator has been calibrated is displayed.

20. Press the **ESC** key twice. . .

    The display returns to normal operation mode.

This completes the User menu.

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